

Article X.

Performance Standards

Section A-1040: Lighting Regulations

1040.1: Purpose. This section provides development standards intended to strike a balance of safety and aesthetics by providing lighting regulations that protect drivers and pedestrians from glare and reduce to reasonable limits the trespass of artificial lighting onto neighboring properties and public or private rights-of-way.

1040.2: Applicability. The following lighting regulations apply to all new outdoor lighting fixtures or the replacement of existing outdoor lighting fixtures within the City of Kirkwood unless specifically listed in subsection 1040.3. Any (1) new building or addition equal to or greater than 50 percent of the square footage of the original structure's footprint or (2) renovation equal to or greater than 50 percent of the appraised value of the improvements on the property as determined by the St. Louis County Assessor's Office shall require the entire site to comply with the requirements of this Section. If the development includes more than one parcel this Section shall apply to each parcel individually and not the development as a whole. All uses which require a Special Use Permit, whether lighting is existing or proposed, will be subject to review by the Planning and Zoning Commission and City Council. Outdoor lighting shall include all exterior lighting including lights mounted onto a building or structure.

1040.3: Exceptions. The following shall be exempt from the regulations of this Section.

- (1) Lighting required by the FAA for air traffic control and warning purposes
- (2) Flagpole vertical up-lighting
- (3) Lighting in the public or private right-of-way installed by a governmental agency for traffic control
- (4) Lighting installed by a governmental agency for the health, safety and welfare of the public
- (5) Electronic or back-lit signage (all signage is subject to Municipal Code of Ordinances Chapter 5, Article I ½, "Sign Code")
- (6) Temporary lighting as part of an approved temporary outdoor use permit
- (7) Temporary lighting for emergency repair
- (8) Lighting for single-family residential uses and their accessory structures

1040.4: General Standards.

- (1) Submittal requirements. All applications submitted to the Planning and Zoning Commission that are subject to subsection 1040.2, shall submit a Lighting Plan in conjunction with the submittal application. All other applications that are not subject to Planning and Zoning Commission review yet are subject to subsection 1040.2, shall submit a Lighting Plan in conjunction with the administrative site plan

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review and building permit application. The Lighting Plan shall be signed and sealed by a registered design professional and include the following:

- a. Plans indicating the location and type of all illuminating devices, fixtures, lamps, and supports on the premises.
- b. Description of the illuminating devices, fixtures, lamps, supports and other devices including, but not limited to, catalog cut sheets by manufacturers and drawings.
- c. Photometric plan indicating the point-by-point footcandle (fc) layout of a site extending ten feet beyond all property lines

(2) Pole mounted fixtures.

- a. Pole-mounted lighting fixtures located equal to or less than 20 feet from a property line shall not exceed 16 feet in height, measured from the finished grade to the top of the fixture. The height of any pedestals upon which pole fixtures are placed shall be included in the overall height measurement.
- b. Pole-mounted lighting fixtures located greater than 20 feet from a property line shall not exceed 24 feet in height, measured from the finished grade to the top of the fixture. The height of any pedestals upon which pole fixtures are placed shall be included in the overall height measurement.
- c. Pole-mounted lighting fixtures for outdoor performance areas, sport and recreation facilities and playfields shall not exceed 80 feet in height, measured from the finished grade to the top of the fixture. The height of any pedestals upon which pole fixtures are placed shall be included in the overall height measurement.

(3) Canopies, including but not limited to, service stations and convenience stores, canopies over store and office fronts, marquees and projecting overhangs, exterior canopies over driveways and building entrances, and pavilions and gazebos, shall provide recessed fixtures that incorporate a lens cover that is either recessed or flush with the bottom surface of the canopy or a surface-mounted fixture incorporating a flat glass that provides full cut-off.

(4) Except for outdoor performance areas, sport and recreation facilities and playfields, all lighting fixtures installed shall be at a minimum full cut-off where no light is permitted at or above a horizontal plane at the bottom of the fixture.

(5) Where topographical issues exist which may cause light to cast on neighboring properties additional shielding requirements may be required.

(6) The Planning and Zoning Commission and/or City Council may require lighting to be dimmed or connected to a motion detector during certain hours of the day depending on the proposed use.

(7) Lighting intended to illuminate building elevations and landscaping shall shine directly onto the intended surface.

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- (8) Minimum illumination levels shall be maintained in accordance with subsection 1040.5.
- (9) Prior to the issuance of an Occupancy Permit an as-built photometric plan signed and sealed by a registered design professional shall be submitted to the Office of the Building Commissioner for verification of compliance with the approved Lighting Plan.
- (10) All lighting fixtures shall be installed and maintained in conformance with the approved Lighting Plan.

1040.5: Illumination Levels.

- (1) **Minimum Illumination Levels.** Site lighting shall be in compliance with the following minimum illumination levels:
 - a. The maintained minimum illumination level for parking lots shall be 1.0 footcandles (fc) at finished grade.
 - b. The maintained minimum illumination level for pedestrian routes, refuge areas, sidewalks, etc. shall be 2.0 footcandles (fc) at finished grade.
- (2) **Maximum Illumination Levels.** Site lighting shall be in compliance with the following maximum illumination levels:
 - a. The maximum illumination level at property lines shall be less than or equal to 0.5 footcandles (fc) at finished grade.
 - b. The maximum illumination level at property lines adjacent to single-family residential uses shall be less than or equal to 0.1 footcandles (fc) at finished grade.
 - c. The maximum illumination level under canopies shall be less than or equal to 42 footcandles (fc) at finished grade.

Section A-1050: Devices for the Generation of Energy

1050.1: Purpose. This section promotes the safe, effective and efficient use of photovoltaic (PV) and small wind energy systems installed to reduce the on-site consumption of utility supplied energy while protecting the health, safety and welfare of adjacent and surrounding land uses. Both PV and small wind energy systems are permitted as accessory uses as prescribed in each Zoning District. These systems may be used to provide supplemental energy to the site on which they are installed or to sell to a utility company only. In no district shall PV and small wind energy systems be permitted as a principal use on site.

1050.2: Applicability. This section applies to all PV and small wind energy systems installed within the City of Kirkwood after the effective date of this Code. Any upgrades, modifications or changes that materially alter the size or placement of an existing PV or small wind energy system shall comply with the provisions of this Section.